REMARKS

Applicants have received and carefully reviewed the Final Office Action of the Examiner mailed October 28, 2008. Claim 33 has been amended to more particularly describe the invention. No new matter has been added. Favorable consideration of the following remarks is respectfully requested.

Telephone Interview

Applicants thank the Examiner for extending the courtesy of a telephone interview to Kevin C. Harrison as their Representative on December 9, 2008. The interview generally pertained to a discussion centering around priority, as well as a brief discussion of possible claim amendments.

Priority Claim

As discussed in the telephone interview, the instant application is a continuation of application Serial No. 09/313,672, which has matured into U.S. Patent No. 6,858,024. The '672 application is itself a continuation of application Serial No. 08/800,927, which has matured into U.S. Patent No. 5,911,715. By definition, therefore, the '927 application discloses the same subject matter as the pending application. Thus, the instant application is entitled to a priority date that is at least as far back as the filing date of the '927 application. The '927 application was filed on February 13, 1997. It is axiomatic, therefore, that the instant application enjoys priority back to at least February 13, 1997. The Examiner has relied upon Noone et al. (U.S. Patent No. 6,591,472) as anticipating the claimed invention. However, and as previously discussed, Noone et al. was filed on December 8, 1998. As this date is after our priority date, the Noone reference is not available as prior art.

The Examiner has asked that Applicants provide specific references within the '927 application showing how and where the instant claims are supported therein. This does not seem appropriate, as the '927 application, by definition, provides the same disclosure as the instant application. If the Examiner questions support for the currently claimed invention, it seems that it would be more appropriate to issue a written description or enablement rejection, rather than questioning Applicants' priority claim. At any rate, the claimed invention is indeed fully

supported by the disclosure on file. To facilitate prosecution, Applicants provide below a summary of how the '927 application supports the claimed invention.

Claim Support

Applicants provide herewith an illustrative but non-limiting sampling of excerpts from U.S. Patent No. 5,911,715, demonstrating that the claimed invention is indeed supported in the asserted priority document. The reference to column and line follows each excerpt:

> The present invention includes a method of manufacturing a catheter for use in intravascular catheter procedures. The method includes providing a mandrel and forming a first layer over the mandrel. A second layer is overlayed or coupled to the first layer. A portion of the second layer is removed to form a high density of grooves in the surface of the second layer.
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> The portion of the second layer may be removed using an abrasion process. The grooves may be generally annular grooves. The abrasion process may further include the steps of rotating the catheter about its longitudinal axis. A grinding wheel having a pattern corresponding to the generally annular grooves is rotated. The catheter is moved into the grinding wheel to a desired depth. The grooves may be V-shaped.
>
> The grooves may be micro-grooves. The density of the grooves may be greater than 5 grooves per inch, with 5 to 50 grooves per inch preferred. The grooves may be filled with a material having a different hardness rating relative to the second layer. The material may be softer relative to the second layer. Alternatively, the material may be harder relative to the second layer. The method may further include the step of grinding the catheter to a uniform outside diameter.

Column 4, lines 39-63.

> FIG. 2 is a drawing of a portion of catheter 10. Catheter shaft 11 is shown having a section ground or abraded away to create a band 15 in which no material exists. As shown in FIG. 2, outer shaft 16 is removed to expose the support member 14, and to create a band 15 which will be filled later with a different material.

In the preferred embodiment, outer tube 16 is removed through an abrasion process. Specifically, the section in which the band 15 to be created is brought in contact with a grinding wheel. Catheter shaft 11 is then rotated 360 degrees to remove material circumferentially around the device. The grinding wheel is slowly advanced to increase the depth of the cut until the support member 14 is exposed. Although abrasion is the preferred mode of processing, the band 15 can be created in many different ways, some of which include alternate extrusion methods, cutting, and thermal processing.

Column 6, lines 13-30.

FIG. 1 shows a section of a catheter 10 which is preferably a guiding catheter. Catheter shaft 11 is comprised of an inner tube 12 which is surrounded by a support member 14. Support member 14 is then surrounded by an outer tube 16. Inner tube 12 is represented in FIG. 1 by dashed lines and the support member 14 is represented by a dotted line.

In the preferred embodiment, inner tube 12 is a thin walled PTFE (polytetrafluoroethylene) tube. This creates a smooth, friction-free surface for the passage of other devices through the inner tube. Support member 14 is a 304 stainless steel wire, wound in a braided pattern around inner tube 12. Alternatively, support member 14 could also be comprised of polymer fibers. Outer tube 16 is a polymer jacket which is placed through an extrusion process onto combined layers of inner tube 12 and support member 14. Preferably, outer tube 16 is comprised of PEBAX®, a polyether block amide (PEBA) available from ATOMCHEM POLYMERS, Birdsboro, Pa. FIG. 6 shows a cross section of this construction.

FIG. 2 is a drawing of a portion of catheter 10. Catheter shaft 11 is shown having a section ground or abraded away to create a band 15 in which no material exists. As shown in FIG. 2, outer shaft 16 is removed to expose the support member 14, and to create a band 15 which will be filled later with a different material.

Column 5, line 63 to column 6, line 19.

FIG. 3 is a plan view of the device depicted in FIG. 2 after the different material, filler material 18, has been placed in the band 15 to create the transition section 22. Filler material 18 is an element which has different physical properties than the outer tube 16. For example, if the catheter shaft 11 is comprised of a flexible polymer, the filler material 18 may be either a rigid polymer, a rigid metal, or an even more flexible polymer. Likewise, if the catheter shaft 11 is comprised of a rigid polymer, the filler material 18 may be a more flexible polymer material.

Column 6, lines 31-40

Therefore, a transition section 22 is created which is more flexible to allow for easier and less traumatic guide catheter placement. Flexible transition sections 22 can be located where tight radiuses are created due to the shape of the guide catheter to allow larger devices to pass through the curve with greater ease.

Column 7, lines 35-40

In one preferred embodiment, grooves 66 extend into a portion of outer layer 74, but do not extend down to support layer 72. The "micro-groove" construction of the present invention allows the flexibility of catheter shaft 56 to be changed at desired areas or "transition zones" along the catheter shaft 56 without sacrificing the structural integrity of the catheter shaft through bonding, fusing, or similar procedures.

Column 9, lines 31-37

Transition zone 61 has a different flexibility than the portion of catheter shaft 56 proximal of transition section 61 and the portion of catheter shaft 56 distal of transition zone 61. In one embodiment, transition zone 61 is relatively more flexible than the portion of catheter shaft 56 proximal of transition zone 61 and the portion of catheter shaft 56 distal of transition zone 61. In another application, transition zone 61 is relatively more stiff than the portion of catheter shaft 56 which is proximal of transition zone 61 and the portion of catheter shaft 56 which is distal of transition zone 61.

Column 10, lines 9-18

In each application, the section of catheter shaft proximal to transition zone 61 and the portion of catheter shaft distal of transition zone 61 has a different degree of flexibility than transition zone 61.

Column 11, lines 7-10

Claim Rejections Under 35 U.S.C. §102

Applicants respectfully traverse the Examiner's rejection of claims 33, 35 and 38-48 under 35 U.S.C. §102(e) as being anticipated by Noone et al. (U.S. 6,591,472). As discussed above, Noone et al. are not available as prior art against the present invention. Favorable reconsideration is respectfully requested.

Reexamination and reconsideration are respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

Todd A. Berg et al.

By their Attorney,

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